



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/075,311

02/14/2002

Mark Thomas Johnson

NL010090

8934

24737

7590

05/05/2004

PHILIPS INTELLECTUAL PROPERTY & STANDARDS

P.O. BOX 3001

BRIARCLIFF MANOR, NY 10510

EXAMINER

NGUYEN, KEVIN M

ART UNIT

PAPER NUMBER

2674

8

DATE MAILED: 05/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/075,311

Applicant(s)

JOHNSON ET AL.

Examiner

Kevin M. Nguyen

Art Unit

2674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 7 is/are rejected.
- 7) ☒ Claim(s) 5 and 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/19/2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-4 are rejected under 35 U.S.C. 102(e) as being anticipated by Shiraki et al (US 6,504,522).

As to claim 1, Shiraki et al teaches an active matrix liquid crystal display (TFT-LCD) comprising a pixel 10 (fig. 2), data electrodes SL1-SL_n (fig. 2), selection electrodes GL1-GL_m (fig. 2), drive means (a source driver 2, and a gate driver 3, fig. 2), a pulsed backlight system (the transmittance of the LCD comprises inherently a backlight system, col. 7, lines 25-26),

the structure of this embodiment, since the discharge time with respect to the last source line is longest (substantially one horizontal period), the discharge voltage V_{DIS} compensates for the insufficient application of the gray-scale voltage. As a result, the gray-scale voltage is sufficiently applied to all of the source lines SL, thereby achieving high quality displays (fig. 7, col. 12, lines 58-64).

Thus, the teaching of Shiraki recited in fig. 7, col. 12, lines 58-64 meets the claimed limitation means for increasing the switching rate of pixels in the sequence of selecting the pixels during operation.

As to claim 2, Shiraki teaches the structure of this embodiment, since the discharge time with respect to the last source line is longest (substantially one horizontal period), the discharge voltage VDIS compensates for the insufficient application of the gray-scale voltage. As a result, the gray-scale voltage is sufficiently applied to all of the source lines SL, thereby achieving high quality displays (fig. 7, col. 12, lines 58-64).

As to claim 3, Shiraki teaches a supplemental capacitor Cs (fig. 3, col. 7, lines 18-19).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shiraki et al in view of Ishihara et al (cited in IDS, EU 0588019).

As to claim 5, Shiraki et al teaches all of the claimed limitations, except for the capacitances of the storage capacitors increase in the sequence of selecting the pixels, and the capacitances of the storage capacitors decrease in the sequence of selecting the pixels.

Ishihara et al teaches TFT-LCD comprising the storage capacitor 63 changes in the array substrate from the upper portion of the liquid crystal panel towards the lower portion of the liquid crystal panel (fig. 17, page 10, lines 39-41).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify each Shiraki's capacitor structure including the change in the array substrate from the upper portion of the liquid crystal panel towards the lower portion of the liquid crystal panel, in view of the teaching in the Ishihara's reference because this would improve difference of contrast and transmittance characteristics due to change of angle for viewing the liquid crystal panel as taught by Ishihara (page 11, lines 2-4).

As to claim 6, Ishihara et al teaches the storage capacitor is reduced from the upper portion of the liquid crystal panel towards the lower power of the liquid crystal panel (page 11, lines 1-2).

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shiraki et al in view of Bonnett et al (US 6,075,506).

As to claim 7, Shiraki teaches all of the claimed limitations, except for the temperature increases in the direction of the sequence of selecting the pixels.

Bonnett teaches a liquid crystal display device comprising the graph 14 illustrates the effect of increasing temperature on the pixels in the odd frames whereas the graph 15 illustrates the effect of increasing temperature on the pixels in the even frames (fig. 4, col. 5, lines 25-28).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Shiraki's LCD device including increasing temperature on the pixels, in view of the teaching in the Bonnett's reference because this would compensate for change in grey level with temperature as taught by Bonnett (col. 6, lines 42-45).

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Kevin M. Nguyen** whose telephone number is **703-305-6209**. The examiner can normally be reached on MON-THU from 9:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richard A Hjerpe** can be reached on **703-305-4709**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9306 (for Technology Center 2600 only)

Hand-delivered response should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth floor (Receptionist).

Art Unit: 2674

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Kevin M. Nguyen
Patent Examiner
Art Unit 2674

KN
April 27, 2004



XIAO WU
PRIMARY EXAMINER